

Application No. 10/571,878
Reply to Office Action dated 10/27/2010

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-19. (Cancelled)

20. (Currently Amended) A block for forming a wall, wherein a plurality of analogous blocks being overlapped staggeringly and continuously in the wall, comprising:

a block being a longitudinally profiled member, and including a top surface, a bottom surface and two end surfaces;

the cross section of the block being substantially of a shape of downward-flared recess;

the top surface of said block having a mid ridge higher than two sides of the surface so that a left supporting slope and a right supporting slope being formed, forming the downward-flared shaped recess;

said top upper surface and bottom surface being formed such that: when the block being overlapped with an [[a]] analogous block thereunder to form the wall, the top surface of the underlying block being engaged with the bottom surface of the upper block, the left and right supporting slopes being used as a blocking structure and interlocking the vertically adjacent blocks;

wherein said left supporting slope and the right supporting slope each including a sloped upper slope portion and a lower shoulder, each shoulder having a top shoulder surface, a bottom shoulder surface, and a lateral side surface, the top shoulder surface, the sloped upper slope portion and the mid ridge constituting said top surface, the bottom shoulder surface is horizontal, the bottom shoulder surface and a bottom foot on one side are at the same plane, when the block being engaged with an upper analogous block to form the wall, a projecting portion formed by the sloped upper slope portion being engaged with a downward-flared shaped recess of the upper analogous block, said top surface, constituted by the top shoulder surface, the sloped upper slope portion and the mid ridge and thereby supporting the upper analogous block,

Application No. 10/571,878
Reply to Office Action dated 10/27/2010

the blocks being shaped and sized such that: when three analogous blocks being overlapped vertically, a top of a ridge of the bottommost block being higher than a bottom foot of the uppermost block.

21-22. (Canceled)

23. (Previously Presented) The block for forming a wall according to claim 20, wherein on either side of the block, bounded by the mid ridge, the bottom shoulder surface of the shoulder and the bottom foot of the block being on the same plane, the top surface and the bottom surface being parallel to each other, the two end surfaces being parallel to each other, the two lateral side surfaces being parallel to each other, the end surfaces and the lateral side surfaces being vertical to the horizontal plane.

24. (Previously Presented) The block for forming a wall according to claim 20, wherein the top of the mid ridge being sharp-angle shaped, platform shaped or arc-shaped.

25. (Previously Presented) The block for forming a wall according to claim 20, wherein at least one of the left and right supporting slopes and the bottom surface being arranged in a stepped manner.

26. (Previously Presented) The block for forming a wall according to claim 20, wherein at least one of the left and right supporting slopes and the downward-flared recess being arranged in a corrugated manner.

27. (Previously Presented) The block for forming a wall according to claim 20, wherein at least one of the top surface and the bottom surface being arranged in a roughness manner.

28. (Previously Presented) The block for forming a wall according to claim 20, wherein

Application No. 10/571,878
Reply to Office Action dated 10/27/2010

said top surface having a radiation-proof plate thereon, which extends out of at least one of the end surfaces, the radiation-proof plates of the adjacent blocks being connected in a manner of end to end, when the wall being formed by the blocks.

29. (Previously Presented) The block for forming a wall according to claim 20, wherein the bottom foot on one side of the block being higher than that on the other side.

30. (Currently amended) A block assembly for forming a wall, comprising blocks and auxiliary blocks,

wherein said block being a longitudinally profiled member, and including a top surface, a bottom surface and two end surfaces; the cross section of the block being substantially of a shape of downward-flared recess; the top surface of said block having a mid ridge higher than two sides of the surface so that a left supporting slope and a right supporting slope being formed, forming the downward-flared recess; said top upper surface and bottom surface being formed such that: when the block being overlapped with an [[a]] analogous block thereunder to form the wall, the top surface of the underlying block being engaged with the bottom surface of the upper block, the left and right supporting slopes being used as a blocking structure and interlocking the vertically adjacent blocks;

wherein said left supporting slope and the right supporting slope each including a sloped upper slope portion and a lower shoulder, each shoulder having a top shoulder surface, a bottom shoulder surface, and a lateral side surface, the top shoulder surface, the sloped upper slope portion and the mid ridge constituting said top surface, the bottom shoulder surface is horizontal, the bottom shoulder surface and a bottom foot on one side are at the same plane, when the block being engaged with an upper analogous block to form the wall, a projecting portion formed by the sloped upper slope portion being engaged with a downward-flared shaped recess of the upper analogous block, said top surface, constituted by the top shoulder surface, the sloped upper slope portion and the mid ridge and thereby supporting the upper analogous block,

the blocks being shaped and sized such that: when three analogous blocks being overlapped vertically, ~~the vertical distance between a top of a ridge of the bottommost block and the bottom foot of the uppermost block being less than one third of the height of one block, a top of a ridge of the bottommost block being higher than a bottom foot of the uppermost block, and~~

Application No. 10/571,878
Reply to Office Action dated 10/27/2010

said blocks being engaged with the auxiliary blocks in the construction of the wall.

31. (Previously Presented) The block assembly for forming a wall according to claim 30, wherein

the auxiliary block comprising three of said blocks, two of them longitudinally opposing to each other and joining, respectively, to the side of the other block;

said auxiliary block being provided at an intersection between the wall and another wall, being longitudinally engaged with the blocks, and being staggeringly overlapped.

32. (Previously Presented) The block assembly for forming a wall according to claim 30, wherein

the auxiliary block comprising two of said blocks, the longitudinal portion of one block joining to one side of the other block so that the auxiliary blocks being in a shape of L or T;

said auxiliary block being provided at an intersection between the wall and another wall, being longitudinally engaged with the blocks, and being staggeringly overlapped.

33. (Currently amended) A wall formed by blocks, wherein a plurality of analogous blocks being overlapped staggeringly and continuously in the wall, comprising:

a block being a longitudinally profiled member, and including a top surface, a bottom surface and two end surfaces; the cross section of the block being substantially of a shape of downward-flared recess; the top surface of said block having a mid ridge higher than two sides of the surface so that a left supporting slope and a right supporting slope being formed, forming the downward-flared recess; said top upper surface and bottom surface being formed such that: when the block being overlapped with an [[a]] analogous block thereunder to form the wall, the top surface of the underlying block being engaged with the bottom surface of the upper block, the left and right supporting slopes being used as a blocking structure and interlocking the vertically adjacent blocks;

wherein said left supporting slope and the right supporting slope each including a sloped upper slope portion and a lower shoulder, each shoulder having a top shoulder surface, a bottom shoulder surface, and a lateral side surface, the top shoulder surface, the sloped upper slope

Application No. 10/571,878
Reply to Office Action dated 10/27/2010

portion and the mid ridge constituting said top surface, the bottom shoulder surface is horizontal, the bottom shoulder surface and a bottom foot on one side are at the same plane, when the block being engaged with an upper analogous block to form the wall, a projecting portion formed by the sloped upper slope portion being engaged with a downward-flared shaped recess of the upper analogous block, said top surface, constituted by the top shoulder surface, the sloped upper slope portion and the mid ridge and thereby supporting the upper analogous block,

the blocks being shaped and sized such that: when three analogous blocks being overlapped vertically, ~~the vertical distance between a top of a ridge of the bottommost block and the bottom foot of the uppermost block being less than one third of the height of one block, a top of a ridge of the bottommost block being higher than a bottom foot of the uppermost block, and~~

in said wall, masonry joints being formed between the adjacent blocks, horizontal masonry joints being formed by the engagement between the top surfaces and the bottom surfaces, vertical masonry joints being formed by the engagement between the end surfaces, the vertically adjacent vertical masonry joints being arranged staggeringly.

34. (Previously Presented) The wall according to claim 33, wherein

a pillar being provided in the wall, at least one outward-extending piece being provided on said pillar;

the outward-extending piece being a longitudinally profiled member, and including a top surface, a bottom surface and two end surfaces, the cross section of the outward-extending piece being substantially of a shape of downward-flared recess, the top surface of the outward-extending piece having a mid ridge higher than two sides of the surface so that left supporting slope and right supporting slope being formed;

one of the end surfaces of the outward-extending piece being engaged with the pillar;

the other end surface of the outward-extending piece being engaged with the blocks, the top surface of the outward-extending piece being engaged with the bottom surface of the upper block, the bottom surface of the outward-extending piece being engaged with the top surface of the underlying block, a plurality of outward-extending pieces being arranged separately and orderly on the pillar, said outward-extending pieces being engaged with the staggeringly overlapped blocks adjacent to the pillar, the left and right supporting slopes of the outward-

Application No. 10/571,878
Reply to Office Action dated 10/27/2010

extending pieces being used as a blocking structure and making the vertically adjacent blocks to be interlocked.

35. (Previously Presented) The wall according to claim 34, wherein

girders being provided in the wall,

a projecting piece being provided on a top surface of one girder, a lower surface of the projecting piece being engaged with the top surface of the one girder, the projecting piece extending to the pillar at a nodal point of two adjacent beams/pillars, and engaging with the pillar, the projecting piece being engaged with the downward-flared recess of the block, when the block engaging with the top surface of the one girder,

a groove being provided on a bottom surface of another girder, the groove extending to the pillar at the nodal point of two adjacent beams/pillars, the groove being engaged with the top surface of the block, when the block engaging with the bottom surface of the girder.

36. (Previously Presented) The wall according to claim 33, wherein

an isolation layer being provided on one side of the wall, the isolation layer being composed of several isolation sub-layers, the isolation sub-layers being in a same layer arranged in a manner of end to end, the isolation sub-layers being arranged as a vertical layer in a lap joint, a lower isolation sub-layer being interposed between an upper isolation sub-layer and the wall, a joint between the upper isolation sub-layer being staggered with that between the lower isolation sub-layer,

an air gap being formed between the isolation layer and the wall.

37. (Currently amended) The wall according to claim 33, wherein

said block being in a shape of an [[a]] elongated plate in a longitudinal direction, a miter wall being formed by staggeringly overlapping the elongated blocks, a vertical masonry joint being formed by the connection of the end surfaces of two blocks, the vertically adjacent vertical masonry joints being disposed in a stagger manner,

the end of the elongated block being supported on a supporting member.

38. (New) The block for forming a wall according to claim 20, wherein

Application No. 10/571,878
Reply to Office Action dated 10/27/2010

the sloped upper slope portion is at an obtuse angle with the lower shoulder, at least a portion of an upper surface of the sloped upper slope portion being in contact with a lower surface of the downward-flared shaped recess of the upper analogous block.

39. (New) The block for forming a wall according to claim 38, wherein

the entire upper surface of the sloped upper slope portion is in contact with a lower surface of the downward-flared shaped recess of the upper analogous block.

40. (New) The block assembly for forming a wall according to claim 30, wherein

the sloped upper slope portion is at an obtuse angle with the lower shoulder, at least a portion of an upper surface of the sloped upper slope portion being in contact with a lower surface of the downward-flared shaped recess of the upper analogous block.

41. (New) The wall according to claim 33, wherein

the sloped upper slope portion is at an obtuse angle with the lower shoulder, at least a portion of an upper surface of the sloped upper slope portion being in contact with a lower surface of the downward-flared shaped recess of the upper analogous block.